

1

Lesson Preparation Book

Programming
and
Artificial Intelligence

1st. Sec

2026

Second term



Teacher's Biography

Name:

School:

The educational administration:

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

Supervisor

School Principal

Teacher's Signature



D.M.RAZK

موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Daily class schedule

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

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The General objectives of teaching programming and AI subject.

- ▽ **Understanding** Programming Languages
- ▽ **Developing** Digital Thinking Skills
- ▽ **Understanding** the fundamental rules of programming languages (such as **Python or JavaScript**) and how to write code
- ▽ **Comprehending** the Concept of Artificial Intelligence
- ▽ **Understanding** Machine Learning and Neural Networks, and how machines can simulate human intelligence
- ▽ **Recognizing** the Importance of Databases
- ▽ **Understanding** the role of data as fuel for artificial intelligence engines and how to collect and analyze it
- ▽ **Developing** Problem-Solving Skills
- ▽ **Using** algorithmic thinking to break down large problems into smaller, programmatically solvable parts
- ▽ **Designing** and Developing Software
- ▽ **Acquiring** the ability to build simple applications or AI models Artificial intelligence capable of making decisions or predicting outcomes.
- ▽ **Logical** thinking and enhancing the ability to construct logical sequences of events and processes (**Logic Building**).
- ▽ **Understanding** the ethics of artificial intelligence.
- ▽ **Recognizing** the importance of generative artificial intelligence.
- ▽ **The ability** to work within software teams to implement integrated technology projects.
- ▽ **Proficiency** in working with static and interactive web pages using artificial intelligence.

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The objectives Specific programming and AI subject.

At the end of the first term the student will be able to:-

- ▽ **Recognizes** the types of networks and the benefits of each type.
- ▽ **Differentiates** between the types of networks.
- ▽ **Understands** the importance of networks in exchanging data and information.
- ▽ **Recognizes** the IP address of a device connected to the internet.
- ▽ **Explains** the IP address and the problems it can cause.
- ▽ **Understands** the importance of IP addresses.
- ▽ **Recognizes** data transmission protocols.
- ▽ **Lists** the types of protocols and the function of each.
- ▽ **Understands** the importance of protocols in transmitting data accurately.
- ▽ **Recognizes** the nature of different types of databases.
- ▽ **Understands** the importance of databases in organizing and storing data.
- ▽ **Understands** how to use algorithms and diagrams to solve a problem.
- ▽ **Can** transform a problem into a diagram or algorithm that can be easily converted into a program.
- ▽ **Understands** the importance of algorithms in facilitating problem-solving.
- ▽ **Understands** how to model data to predict potential outcomes
- ▽ **Can create** static web pages using artificial intelligence
- ▽ **Understands** how to repeatedly execute a set of commands based on the fulfillment of a condition or a set of conditions
- ▽ **Recognizes** the importance of repeatedly executing a set of commands based on the fulfillment of a condition or a set of conditions
- ▽ **Lists** the repetitions of executing a set of commands based on the fulfillment of a condition or a set of conditions

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Distribution of programming and AI content For 1st.Sec 2025 / 2026 -Second Term

Month	week	Date	TOPIC	
February	1	7-2-2026	<u>First and second session : :qureo platform</u> Chapter 18 :HTML (1) Chapter 19: CSS (1) <u>Third and fourth session : programming and AI book</u> <u>Chapter 8 : networks</u> 8-1 : computer networks 8-2 : IP Addresses and Domain Names	Tests & Evaluation According to Resolution 136, a weekly test is conducted.
	2	14-2-2026	<u>First and second session : :qureo platform</u> Chapter 20 :comprehension check Chapter 21: condition (4) <u>Third and fourth session : programming and AI book</u> <u>Follow Chapter 8 : networks</u> 8-3: Communication Protocol <u>Chapter 9 :database</u> 9-1 : Database [1]	Holidays, official vacations, and exam dates must be taken into consideration.
	3	21-2-2026	<u>First and second session : :qureo platform</u> Chapter 22: looping (2) Chapter 23: functions (3) <u>Third and fourth session : programming and AI book</u> Follow Chapter 9 : database : 9-2 : Database [2] -----2 session	
	4	28-2-2026	<u>First and second session : :qureo platform</u> Chapter 24: looping (2) Chapter 25: looping (3) <u>Third and fourth session : programming and AI book</u> <u>Chapter 12 : Programming (Python)</u> 12-1 : algorithmes ----- 2 sessions	
March	5	7-3-2026	<u>First and second session : :qureo platform</u> Chapter 26: Array (2) Chapter 27: comprehension check <u>Third and fourth session : programming and AI book</u> <u>Follow Chapter 12 : Programming (Python)</u> 12-2 :Programming Basics [1] (Python) ----- 2 sessions	
	6	14-3-2026	<u>First session : :qureo platform</u> Chapter 28: for of <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 12 : Programming (Python)</u> 12-3 :Programming Basics [2] (Python) <u>Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13-1 : Introduction to Generative Artificial Intelligence 13-2 : Create and modify a static web page using HTML and CSS	

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April	7	21-3-2026	<u>First session : :qureo platform</u> Chapter 27: comprehension check <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13-3 : Interactive web pages using HTML JS -----3 session	Eid al-Fitr will be on Saturday, March 21, 2026. The
	8	28-3-2026	<u>First session : :qureo platform</u> Chapter 30: comprehension check <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13- 4 :Creating a static webpage using generative artificial intelligence. 13 -5: Creating an interactive webpage using generative artificial intelligence.	
	9	4-4-2026	<u>First session : :qureo platform</u> Review on the platform <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13- 6 :Website presentation. 13 -7:Developing a testing application	The first consultative meeting for parents was held on 8/4/2026
	10	11-4-2026	<u>First session : :qureo platform</u> Review on the platform <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13- 8 : Test application review. 13 -9:Developing a block-breaking game (1)	Sham El Nessim holiday, Monday, April 13, 2020
	11	18-4-2026	<u>First session : :qureo platform</u> Review on the platform <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13- 10 : Developing a block-breaking game (2) 13- 11 : Summary of the game "Break the blocks "	Sinai Liberation Day, Saturday 24 4/2026 Labor Day, Friday 5/1/2026 Second Monthly Exam from 26/4/ to 30/4/2026
	12	25-4-2026	<u>First session : :qureo platform</u> Review on the platform <u>second , Third and fourth session : programming and AI book</u> <u>Follow Chapter 13 : Introduction to Generative Artificial Intelligence: What is Artificial Intelligence?</u> 13 -12: A presentation of the developed block-breaking game 3---session	
	13	2-5-20-26	<u>General revision</u>	
	14	9-5-2026	<u>Start of the second semester exams</u> :The second monthly meeting for parents will held on 7/5/2026	

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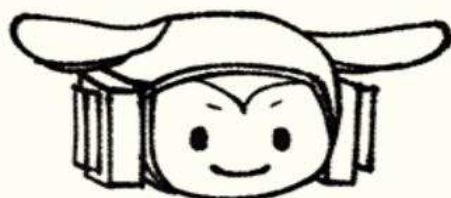
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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				18	1:5	What is HTML? And its relation with CSS and JavaScript

1	What is HTML?	✓	2	Display of text	✓
3	Listing	✓	4	Image display	✓
5	Comment	✓	Ⓟ	Review	✓

Language differences



HTML

Build the framework

HTML



CSS

Create appearance

HTML + CSS



JavaScript

Create movement

HTML + CSS + JavaScript

※ HTML is a markup language and CSS is a stylesheet language, which are not included in "programming languages."

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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				19	1:4	Chapter19 CSS (1)

[Chapter19]CSS(1)



Learn how to change the color of text and change the size of characters to adjust the appearance of text displayed in the browser using CSS!

1

character color



2

Character thickness and size



3

class



4

Comment



Review



Teacher's Signature

Grade	Class	Date	Period	unit	Lesson	Lesson Title
First				8	1	Computer Networks

Introduction-:How could we exchange data and information

Lesson objectives: Recognizes some basic concepts about networks -can define the different types of networks - feel the importance of networks-

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know to Learn: Critical thinking, analysis, and comparison Learn tonumerical values to understand network patterns Issues of globalization and citizenship : creasing promise; technological awareness. Electronic whiteboard - textbook- presentation			☐Brainstorming ☐Dialogue and discussion ☐ cooperative learning		Form groups of your colleagues; each group should write a summary about a type of network.	Draw a LAN NETWORK	True or false: A network within a relatively limited area, such as within a school or home, is referred to wan()
Weekly evaluation	Complete:is A server that manages data and files on a network is referred to as a file server						

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Grade	Class	Date	Period	UNIT	Lesson	Lesson Title
First				8	2	IP Addresses and Domain Names

Introduction/ the What is IP Addresses and Domain?

Lesson objectives /- **Distinguish** between Global IP address and Private IP address.

- **differ between** the IP Addresses and Domain?

-**Explain** Media culture

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know to Learn: Critical thinking, analysis, and comparison Learn to numerical values to understand network patterns Issues of globalization and citizenship: creasing promise; technological	Electronic whiteboard - textbook- presentation		☐ Brainstorming ☐ dialogue and discussion ☐ critical thinking		Discuss with your classmates the implications of the rapid spread of the internet; there are almost no new IPv4 addresses available for allocation anymore.	Issue an IP Address Representation	Complete : : An IP address used on the internet.
Weekly evaluation	Put a (✓) or (×) DNS : A system that associates domain names with IP addresses and vice versa. The (12DNS server) is responsible for fulfilling that role() Teacher's Signature						

Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				20	1	[Chapter20] Comprehension Check

[Chapter20] Comprehension Check



Let's review the content from Chapter 18 to Chapter 19 to ensure you understand it!

1

Review from 18 to 19



Midterm Test



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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				21	1:5	[Chapter21] Conditions (4) Let's review how to use and write if statements, if-else statements, and else if statements!

[Chapter21]Conditions (4)



Let's review how to use and write if statements, if-else statements, and else if statements!

1

Conditional Review



2

Operator Practice



3

Scope of if statements



4

Nested conditional branches



5

Practice nesting if statements



Review



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Grade	Class	Date	Period	unit	Lesson	Lesson Title
First				8	3	Communication Protocol

Introduction / What are the communication protocols?

Lesson objectives / **Learns about** type of protocols **- list** the different between protocols **Understands** the importance of protocols types

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know to Learn: Critical thinking, analysis, and comparison Learn to numerical values to understand network patterns Issues of globalization and citizenship: creasing promise; technological awareness.	Electronic whiteboard - textbook- presentation		☐ Brainstorming ☐ dialogue and discussion ☐ critical thinking		In collaboration with your classmates: When data is transmitted over the internet, it is sent according to TCP/IP. Reorder the steps on page 123 from A to D in the order of internet communication.	Create a table illustrating the communication mechanisms in TCP/IP.	True or False: 1- The communication protocol indicates enhanced security through data encryption. ()
Weekly evaluation	Put(√) or (x):- false information that is deliberately spread or unsubstantiated are Misinformation and rumors Teacher's Signature						

Grade	Class	Date	Period	unit	Lesson	Lesson Title
First				9	1	Database [1]

Introduction / What are databases, and what are they used for?

Lesson Objectives / To understand what databases are and their types

To differentiate between types of databases in a way that facilitates data access -

To understand the importance of databases in organizing and storing data

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
Learn to understand: Critical thinking; analysis and comparison. Scientific values: Understanding the importance of atabases. Globalization and citizenship issues: Increasing technological awareness.	Electronic whiteboard - textbook- presentation		□Brainstorming □dialogue and discussion □learning cooperative		Answer question 2 on page 136 in your textbook.	Using PowerPoint, create a slide illustrating the importance of databases.	Complete: ...provides a mechanism to ensure consistency in data relationships.
Weekly evaluation	Complete:- Database types are/...../...../.....						Teacher's Signature



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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				22	1:5	[Chapter22]Looping (2) Let's review how to use and write for loops that repeat a specified process a specified number of times!

[Chapter22]Looping (2)



Let's review how to use and write for loops that repeat a specified process a specified number of times!

1

Reviewing loops



2

Scope of for loop



3

Nested loops and conditionals



4

Nesting practice



5

How to write operators



Review



<https://me-tp.com>

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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				23	1:4	[Chapter23]Functions (3) Let's review how to use and write functions that receive data, execute a specified process, and return the result!

[Chapter23]Functions (3)



Let's review how to use and write functions that receive data, execute a specified process, and return the result!

- | | | | | | |
|---|-----------------------------|--|---|---------------------------|--|
| 1 | Review of functions | | 2 | Scope in functions | |
| 3 | Functions without arguments | | 4 | Multi-parameter functions | |
| | Review | | | | |

Teacher's Signature

Grade	Class	Date	Period	UNIT	Lesson	Lesson Title
First				9	2	Database [2] : Relational Database

Introduction / What is a relational database?

Lesson Objectives / To identify the types of databases and their functions

- To differentiate between types of databases in a way that facilitates data access - **To understand** the importance of databases in organizing and storing data

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know to Learn: comparison And the Critical thinking; analysis Learn to live with others: responsibility social Issues of globalization and citizenship: Digital security	Electronic whiteboard - textbook- presentation		☐ Brainstorming ☐ Collaborative Learning ☐ Dialogue and discussion		n collaboration with your classmates, design a database for your classmates that includes each student's ID number, name, and activity type.	ink data from multiple tables according to specific criteria and display it as a single table.	Complete: A language used in relational databases to manipulate data.
Weekly Evaluation	True or false: The Relational Algebra Operations(Selection) : Only rows that meet given conditions are extracted and displayed.() Teacher's Signature						



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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				24	1	Chapter24]Comprehension Check Let's review to check if you understand the content from Chapter 21 to Chapter 23!

[Chapter24]Comprehension Check



Let's review to check if you understand the content from Chapter 21 to Chapter 23!

1

Review of 21-23



Midterm Test



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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				25	1:3	Chapter25]Looping (3) Let's review how to use and write for loops that repeat a specified process a specified number of times!

[Chapter25]Looping (3)



Let's review how to use and write for loops that repeat a specified process a specified number of times!

1

Repeating math operations



2

Math repetition practice



3

Using for loop counter i



Review



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Grade	Class	Date	Period	Unit	Lesson	Lesson Title
First				12	1	Algorithm(control structure - Programming Language)

Introduction / Is their a way that help me solving a problem in an organized way ?

objectives Lesson / Recognizes what algorithms and schemes are for solving a problem

- **Transforms** a problem into a scheme that can be easily converted into a program - - **Understands** the importance of algorithms in problem-solving

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration students if available	Teaching strategies	Subject	Educational objectives	Formative Assessment	Evaluation
know to Learn: comparison And the Critical thinking; analysis Learn to get along with others: Understanding the importance of algorithms in problem-solving Issues of globalization and citizenship: Increasing technological awareness	Electronic whiteboard - textbook- presentation		□ Brainstorming □ Collaborative Learning □ Dialogue and discussion		sing PowerPoint, create a slide illustrating the steps involved in using algorithms to solve a problem.	Represent the algorithms primarily using three control structures.	True or False: Python is the language used in fields such as artificial intelligence (AI) and statistics, and can be implemented with a
Weekly evaluation	Choose the correct answer :- the visual programming language developed for beginners and children from the options A to D, and answer using the letter. (A Python B Scratch C JavaScript D BASIC) Teacher's Signature						

Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				26	1:4	[Chapter26] Arrays (2) Let's review how to write arrays, retrieve values, and use them in combination with loops.

[Chapter26]Arrays (2)



Let's review how to write arrays, retrieve values, and use them in combination with loops.

1

Reviewing arrays



2

Combining Loops
and Arrays



3

Array Length Usage



4

Arrays with Loops &
If



Review



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Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				27	--	[Chapter27]Comprehension Check Let's review to check if you understand the content from Chapter 25 to Chapter 26!

[Chapter27]Comprehension Check



Let's review to check if you understand the content from Chapter 25 to Chapter 26!

1

Review of 25-26



Midterm Test



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Grade	Class	Date	Period	Unit	Lesson	Lesson Title
First				12	2	Programming Basics [1] (Python) Variables and Sequential Structure

Introduction / Variables, sequential structure, and using the Print function.

Lesson objectives: / **know** how to use print to output data and information

- **use** print to output the information

- **feel** the importance of using "print"

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology or integration students if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know to Learn: comparison And the Critical thinking; analysis Scientific Values: Understanding the importance of data modeling for predicting outcomes Globalization and Citizenship Issues: Increasing technological presentation - textbook - Interactive whiteboard			☐ Brainstorming ☐ Collaborative Learning ☐ Dialogue and discussion		Complete: Prediction is the manipulation of a model to predict phenomena or events, even when using real objects is difficult.	Making predictions through simulation.	Create a model to predict possible outcomes.
Weekly evaluation		Answer the question no, 3 page 162					Teacher's Signature

Grade	Class	Date	Period	Chapter	Lesson	Lesson Title
First				28	1:3	Let's learn how to combine for loops and arrays to output all values in an array!

[Chapter28]for of



Let's learn how to combine for loops and arrays to output all values in an array!

1

Review of loops



2

for of



3

Practicing for...of



Review



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Grade	Class	Date	Period	Unit	Lesson	Lesson Title
First				12	3	Programming Basics [2] (Python) Loop Structure -- Branching Structure

Introduction / What are Loops?

Lesson Objectives / - To learn how to repeat the execution of a set of commands multiple times based on the fulfillment of a condition or a set of conditions

To understand the importance of repeating the execution of a set of commands multiple times based on the fulfillment of a condition or a set of conditions-

To list the steps of repeating the execution of a set of commands multiple times based on the fulfillment of a condition or a set of conditions

Skills, values and issues covered in the lesson	Teaching Aids	Assistive technology for integration if available	Teaching strategies	Subject	Educational activities	Formative assessment	Evaluation
know Learn to: Problem solving ; analysis And the comparison Learn to get along with others: Understanding the importance of studying programming. Issues of globalization and citizenship: Increasing technological presentation -textbook -whiteboard Interactive			☐ Brainstorming ☐ Collaborative Learning ☐ Dialogue and discussion		Question 4 page 167 : The following program displays the number of even numbers between 1 and 10. Fill in the blanks A to C Create a loop with 10 iterations.		Place a cross (✓) or an X (×): This operator, when placed between two values or variables (≠!), means that the two values are not equal.
Weekly evaluation	Answer school book excesses no.2 page 167						

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امسح الباركود بالمويل لتثبيت
التطبيق وتحميل كل الملازم مجاناً وبسرعة



حمل التطبيق الآن



كورسات ونتائج امتحانات



ملازم ثانوي



ملازم اعدادي



ملازم ابتدائي



موقع الدكتور محمد رزق
Dr. Mo. RIZK



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